UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,027	11/04/2003	Walter Castleberry	N2215-63142	6161

32009   7590   12/10/2007
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EXAMINER
NGUYEN, STEVE N

ART UNIT	PAPER NUMBER
2117	

MAIL DATE	DELIVERY MODE
12/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	**Applicant(s)**
Office Action Summary	10/701,027	CASTLEBERRY ET AL.
	Examiner	**Art Unit**	
	Steve Nguyen	2117	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05 November 2007_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-10 and 21_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-10 and 21_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _25 October 2006_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20071205

DETAILED ACTION

1.   Claims 1-10 and 21 are currently pending.

Response to Arguments

2.   Applicant's arguments filed 11/5/2007 have been fully considered but they are
not persuasive.

Applicant argues that Minko teaches retransmitting lost data once a missing data
signal is detected and fails to teach adding a predetermined value to a sequence
counter.

The Examiner asserts that Minko teaches recovering lost data once a
predetermined value, in this case a threshold value, is added to the memory buffer
storing a lost packets count. In col. 7, lines 37-40 the recovery process is initiated by
adding the predetermined threshold number of lost packets to the memory buffer. This
count value in turn initiates the recovery process as detailed in col. 7, lines 37-40.

The Examiner disagrees with the Applicant and maintains all rejections of claims
1-10 and 21. All amendments and arguments by the Applicant have been considered.
It is the Examiner's conclusion that claims 1-10 and 21 are not patentably distinct or
non-obvious over the prior art of record as applied in the last office action. Therefore,
the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

3.   Claims 1-3, 6, 8-10, and 21 rejected under 35 U.S.C. 103(a) as being

unpatentable over Colton et al (6,509,841; hereinafter referred to as Colton) in view of

Minko (US Pat. 5,963,551).

As per claim 1:

Colton teaches a method for correcting data signal errors in a meter, comprising:

• receiving ordered data signals from the meter (Fig. 1; col. 4, lines 14-18).

Not explicitly disclosed by Colton is:

• analyzing the sequence of the ordered data signals to detect a missing signal; and

• compensating for the missing data signal by adding a predetermined value to a sequence counter.

However, Minko teaches analyzing the sequence of the ordered data signals to detect a missing signal (col. 7, lines 7-14); and compensating for the missing data signal by adding a predetermined value to a sequence counter (col. 7, lines 20-25 and 34-40; lost packets are compensated for by when the lost packets count shown in Fig. 3, element 310 exceeds a user-defined acceptance threshold as detailed in col. 8, lines 23-26. Thus, adding a value to the lost packets counter initiates the recovery process).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the wireless data transmission method of Minko for remote real-time monitoring of utility meters. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that Minko would have provided a reliable service that was dynamically adjustable (col. 8, lines 9-16) and could have been used for any appropriate communications channel (col. 2, lines 21-25).

As per claim 2:

Minko teaches the method of claim 1 above, where a missing data signal is detected by calculating a variable based on a present data signal and a previous data signal in the sequence of ordered data signals (col. 7, lines 7-17).

As per claim 3:

Minko further teaches the method of claim 2, where values related to the previous data signal are stored in a status register (col. 7, lines 7-9).

As per claim 6:

Minko further teaches the method of claim 2 above, but does not explicitly state

the variable is calculated by subtracting a binary value of the previous data signal from

a binary value of the present data signal. However, it would have been obvious to a

person of ordinary skill in the art at the time the invention was made to subtract a binary

value of the previous data signal from a binary value of the present data signal since the

data index is a binary number.

As per claim 8:

Minko teaches the method of claim 1 above, where a missing data signal is

detected by determining whether a binary state value for a present data signal is the

same as a binary state value for a previous data signal (col. 7, lines 7-14).

As per claim 9:

Minko further teaches the method of claim 1, where the sequence counter counts

up (col. 7, lines 12-14).

As per claim 10:

Colton and Minko teach the method of claim 1 above, but do not explicitly

mention the sequence counter counts down. However, one of ordinary skill in the art at

the time the invention was made would have realized that the counter of Minko is a

means of sequentially keeping track of the lost packets, and that operating the counter

inversely would have been functionally equivalent.

As per claim 21:

Colton teaches method for detecting errors in a meter, comprising:

- step for receiving a sequence of data signals of the meter (Fig. 1; col. 4, lines 14-18);

Not explicitly disclosed by Colton is:

- step for analyzing the sequence of data signals to detect a missing data signal; and

- step for compensating for a missing data signal by adding a predetermined value to a sequence counter.

However, Minko teaches analyzing the sequence of the ordered data signals to detect a missing signal (col. 7, lines 7-14); and compensating for the missing data signal by adding a predetermined value to a sequence counter (col. 7, lines 20-25 and 34-40; lost packets are compensated for by when the lost packets count shown in Fig. 3, element 310 exceeds a user-defined acceptance threshold as detailed in col. 8, lines 23-26. Thus, adding a value to the lost packets counter initiates the recovery process).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the wireless data transmission method of Minko for remote real-time monitoring of utility meters. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that Minko would have provided a reliable service that was dynamically adjustable (col. 8, lines 9-16) and could have been used for any appropriate communications channel (col. 2, lines 21-25).

4.   Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Colton in

view of Minko as applied above, and further in view of Ashida (US Pat. 4,538,119).

As per claim 7:

Colton and Minko teach the method of claim 6 above. Not explicitly disclosed is

where the subtracting is done by adding the two's complement of the binary value of the

previous data signal to the binary value of the present data signal. However, Ashida

teaches that subtraction of binary data is performed using two's compliment addition

(col. 7, lines 6-8).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to use two's compliment addition for subtracting the

sequence indexes. This modification would have been obvious to one of ordinary skill

in the art, at the time the invention was made, because one of ordinary skill in the art

would have recognized that subtraction of binary data is performed using two's

compliment addition, as disclosed by Ashida in col. 7, lines 6-8.

5.   Claims 4 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over

Colton in view of Minko as applied above, and further in view of Omura (US Pat.

5,495,438).

As per claims 4 and 5:

Colton and Minko teach the method above. Not explicitly disclosed is a non-

volatile ferro-electric random access memory component. Omura in an analogous art

teaches a ferro-electric random access memory component (abstract).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to the memory of Omura in the system of Colton and Minko. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that the memory of Omura has a long life (col. 1, lines 62-65).

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Nguyen whose telephone number is (571) 272-7214. The examiner can normally be reached on M-F, 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steve Nguyen
Examiner
Art Unit 2117